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## SEQUENCE LISTING

<110> Tamatani, Takuya  
Tezuka, Katsunari

<120> CELL SURFACE MOLECULE MEDIATING CELL  
ADHESION AND SIGNAL TRANSMISSION

<130> 06501-039001

<140> US 09/383,551

<141> 1999-08-26

<150> PCT/JP98/00837

<151> 1998-02-27

<150> JAPAN 09-62290

<151> 1997-02-27

<150> JAPAN 10-62217

<151> 1998-02-26

<160> 26

<170> FastSEQ for Windows Version 4.0

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20 25 30	

ttt cac aac gga ggt gta caa att tta tgc aaa tat cct gac att gtc	144
Phe His Asn Gly Gly Val Gln Ile Leu Cys Lys Tyr Pro Asp Ile Val	
35 40 45	

cag caa ttt aaa atg cag ttg ctg aaa ggg ggg caa ata ctc tgc gat	192
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50 55 60	

ctc act aag aca aaa gga agt gga aac aca gtg tcc att aag agt ctg	240
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 65 70 75 80  
 Lys Phe Cys His Ser Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
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 Tyr Asn Leu Asp His Ser His Ala Asn Tyr Tyr Phe Cys Asn Leu Ser  
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gcc aat tat gag atg ttt ata ttt cac aac gga ggt gta caa att tta      148
Ala Asn Tyr Glu Met Phe Ile Phe His Asn Gly Gly Val Gln Ile Leu
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tgc aaa tat cct gac att gtc cag caa,ttt aaa atg cag ttg ctg aaa      196
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Thr Val Ser Ile Lys Ser Leu Lys Phe Cys His Ser Gln Leu Ser Asn
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tat tac ttc tgc aac cta tca att ttt gat cct cct cct ttt aaa gta      388
Tyr Tyr Phe Cys Asn Leu Ser Ile Phe Asp Pro Pro Pro Phe Lys Val
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act ctt aca gga gga tat ttg cat att tat gaa tca caa ctt tgt tgc      436
Thr Leu Thr Gly Gly Tyr Leu His Ile Tyr Glu Ser Gln Leu Cys Cys
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Val Phe Val Phe Cys Phe Leu Ile Lys Leu Leu Thr Gly Glu Leu Asn  
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25 30 35

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Ile Ser Cys Asn Tyr Pro Glu Thr Val Gln Gln Leu Lys Met Gln Leu  
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Phe Lys Asp Arg Glu Val Leu Cys Asp Leu Thr Lys Thr Lys Gly Ser  
60 65 70

gga aac acc gtg tcc atc aag aat ccg atg tcc tgt cca tat cag ctg 295  
Gly Asn Thr Val Ser Ile Lys Asn Pro Met Ser Cys Pro Tyr Gln Leu  
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tcc aac aac agt gtc tct ttt ttc cta gac aac gca gac agc tcc cag 343  
Ser Asn Asn Ser Val Ser Phe Phe Leu Asp Asn Ala Asp Ser Ser Gln  
90 95 100

ggc agc tac ttt tta tgc agc ctg tgg att ttc gac cca ccc cct ttt 391  
Gly Ser Tyr Phe Leu Cys Ser Leu Ser Ile Phe Asp Pro Pro Pro Phe  
105 110 115

caa gaa aag aac ctt agt gga gga tat tgg ctt att tat gaa tcc cag 439  
Gln Glu Lys Asn Leu Ser Gly Gly Tyr Leu Leu Ile Tyr Glu Ser Gln  
120 125 130 135

ctt tgt tgc cag ctg aag ctt tgg tta ccc gta ggg tgt gca gct ttt 467  
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140 145 150

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atg gcg gca gtc aac aca aac aaa aag tcc aga ctt gca ggt atg acc 631  
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Ser  
200

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Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser
      20                      25                      30

ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc 144
Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val
      35                      40                      45

cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa 192
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu
      50                      55                      60

ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca 240
Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro
      65                      70                      75                      80

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85 90 95

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Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser  
100 105 110

att ttc gac cca cct cct ttt caa gaa agg aac ctt agt gga gga tat 384  
Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr  
115 120 125

tgg cat att tat gaa tcc cag ctg tgc tgc cag ctg aag ctg tgg cta 432  
Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
130 135 140

ccc gta ggg ttg cca gct ttc gtt gtg gta ctg ctt ttt gga tgc ata 480  
Pro Val Gly Leu Pro Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile  
145 150 155 160

ctt atc atc tgg ttt tca aaa aag aaa tac gga tcc agt gtg cat gac 528  
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp  
165 170 175

cct aat agt gaa tac atg ttc atg gcg gca gtc aac sca aac aaa aag 576  
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys  
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Val Phe Val Phe Cys Phe Leu Ile Lys Leu Leu Thr Gly Glu Leu Asn  
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25 30 35

att tct tgt aac tac cct gag act gtc cag cag tta aaa atg cag ttg 199  
Ile Ser Cys Asn Tyr Pro Glu Thr Val Gln Gln Leu Lys Met Gln Leu  
40 45 50 55



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75 80 85	
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Ser Asn Asn Ser Val Ser Phe Phe Leu Asp Asn Ala Asp Ser Ser Gln	
90 95 100	
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Val Ala Ala Leu Leu Phe Gly Cys Ile Phe Ile Val Trp Phe Ala Lys	
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Lys Lys Tyr Arg Ser Ser Val His Asp Pro Asn Ser Glu Tyr Met Phe	
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Met Ala Ala Val Asn Thr Asn Lys Lys Ser Arg Leu Ala Gly Thr Ala	
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 35 40 45  
 Gln Gln Leu Lys Met Gln Leu Phe Lys Asp Arg Glu Val Leu Cys Asp  
 50 55 60  
 Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Asn Pro  
 65 70 75 80  
 Met Ser Cys Pro Tyr Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
 85 90 95  
 Asp Asn Ala Asp Ser Ser Gln Gly Ser Tyr Phe Leu Cys Ser Leu Ser  
 100 105 110  
 Ile Phe Asp Pro Pro Pro Phe Gln Glu Lys Asn Leu Ser Gly Gly Tyr  
 115 120 125  
 Leu Leu Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
 130 135 140  
 Pro Val Gly Cys Ala Ala Phe Val Ala Ala Leu Leu Phe Gly Cys Ile  
 145 150 155 160  
 Phe Ile Val Trp Phe Ala Lys Lys Lys Tyr Arg Ser Ser Val His Asp  
 165 170 175  
 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys  
 180 185 190  
 Ser Arg Leu Ala Gly Met Thr Ser  
 195 200

<210> 14  
 <211> 200  
 <212> PRT  
 <213> Mus musculus

<400> 14  
 Met Lys Pro Tyr Phe Cys His Val Phe Val Phe Cys Phe Leu Ile Arg  
 1 5 10 15  
 Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser  
 20 25 30  
 Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val  
 35 40 45  
 Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu  
 50 55 60  
 Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro  
 65 70 75 80  
 Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
 85 90 95  
 Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser  
 100 105 110  
 Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr  
 115 120 125  
 Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
 130 135 140

```

Pro Val Gly Leu Pro Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile
145          150          155          160
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp
          165          170          175
Pro Asn Ser Glu Tyr Met Phe Met Ala Val Asn Thr Asn Lys Lys
          180          185          190
Ser Arg Leu Ala Gly Val Thr Ser
          195          200

```

<210> 15  
 <211> 216  
 <212> PRT  
 <213> Rattus norvegicus

```

<400> 15
Met Lys Pro Tyr Phe Ser Cys Val Phe Val Phe Cys Phe Leu Ile Lys
1          5          10          15
Leu Leu Thr Gly Glu Leu Asn Asp Leu Ala Asn His Arg Met Phe Ser
          20          25          30
Phe His Asp Gly Gly Val Gln Ile Ser Cys Asn Tyr Pro Glu Thr Val
          35          40          45
Gln Gln Leu Lys Met Gln Leu Phe Lys Asp Arg Glu Val Leu Cys Asp
          50          55          60
Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Asn Pro
65          70          75          80
Met Ser Cys Pro Tyr Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
          85          90          95
Asp Asn Ala Asp Ser Ser Gln Gly Ser Tyr Phe Leu Cys Ser Leu Ser
          100          105          110
Ile Phe Asp Pro Pro Pro Phe Gln Glu Lys Asn Leu Ser Gly Gly Tyr
          115          120          125
Leu Leu Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
          130          135          140
Pro Val Gly Cys Ala Ala Phe Val Ala Ala Leu Leu Phe Gly Cys Ile
145          150          155          160
Phe Ile Val Trp Phe Ala Lys Lys Lys Tyr Arg Ser Ser Val His Asp
          165          170          175
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
          180          185          190
Ser Arg Leu Ala Gly Thr Ala Pro Leu Arg Ala Leu Gly Arg Gly Glu
          195          200          205
His Ser Ser Cys Gln Asp Arg Asn
          210          215

```

<210> 16  
 <211> 200  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> consensus sequence

<221> VARIANT  
 <222> (1)...(200)  
 <223> Xaa = Any Amino Acid

<400> 16

```

Met Lys Pro Tyr Phe Xaa Xaa Val Phe Val Phe Cys Phe Leu Ile Lys
1      5      10      15
Leu Leu Thr Gly Glu Xaa Asn Xaa Xaa Ala Asn His Arg Met Phe Ser
20      25      30
Phe His Xaa Gly Gly Val Gln Ile Ser Cys Xaa Tyr Pro Glu Thr Val
35      40      45
Gln Gln Leu Lys Met Gln Leu Phe Lys Xaa Arg Glu Val Leu Cys Asp
50      55      60
Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Asn Pro
65      70      75      80
Met Xaa Cys Xaa Tyr Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu
85      90      95
Xaa Asn Xaa Asp Ser Ser Gln Gly Ser Tyr Xaa Xaa Cys Ser Leu Ser
100      105      110
Ile Phe Asp Pro Pro Pro Phe Gln Glu Xaa Asn Leu Ser Gly Gly Tyr
115      120      125
Leu Xaa Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu
130      135      140
Pro Val Gly Cys Ala Ala Phe Val Xaa Xaa Leu Leu Phe Gly Cys Ile
145      150      155      160
Xaa Ile Xaa Trp Phe Xaa Lys Lys Lys Tyr Xaa Ser Ser Val His Asp
165      170      175
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys
180      185      190
Ser Arg Leu Ala Gly Xaa Thr Xaa
195      200

```

<210> 17

<211> 214

<212> PRT

<213> Artificial Sequence

<220>

<223> consensus sequence

<221> VARIANT

<222> (1)...(214)

<223> Xaa = Any Amino Acid

<400> 17

```

Met Leu Xaa Leu Xaa Leu Ala Trp Xaa Leu Xaa Leu Phe Xaa Leu Xaa
1      5      10      15
Ile Xaa Val Xaa Xaa Xaa Xaa Ile Xaa Val Xaa Gln Xaa Xaa Xaa Xaa
20      25      30
Xaa Ala Xaa Xaa Asn Gly Xaa Xaa Xaa Xaa Xaa Cys Lys Tyr Xaa Xaa
35      40      45
Pro Xaa Xaa Xaa Xaa Glu Phe Arg Xaa Xaa Leu Leu Lys Gly Xaa Asp
50      55      60
Ser Xaa Val Xaa Xaa Cys Xaa Xaa Xaa Xaa Thr Tyr Xaa Xaa Gly Asn
65      70      75      80
Xaa Val Xaa Xaa Lys Xaa Xaa Xaa Xaa Cys Xaa Gly Xaa Leu Ser Asn
85      90      95
Asn Ser Val Xaa Phe Xaa Leu Gln Asn Leu Xaa Xaa Xaa Xaa Thr Xaa
100      105      110
Xaa Tyr Phe Cys Lys Xaa Glu Xaa Met Tyr Pro Pro Pro Tyr Xaa Xaa
115      120      125
Xaa Xaa Xaa Asn Gly Thr Xaa Ile His Val Xaa Xaa Xaa Xaa Leu Cys

```

```

      130      135      140
Pro Xaa Xaa Xaa Phe Xaa Xaa Trp Xaa Leu Xaa Xaa Val Xaa Xaa Xaa
145      150      155      160
Leu Xaa Xaa Tyr Ser Xaa Leu Xaa Thr Ala Xaa Ile Xaa Xaa Xaa Xaa
      165      170      175
Xaa Lys Lys Arg Ser Xaa Leu Xaa Xaa Gly Xaa Tyr Met Xaa Met Xaa
      180      185      190
Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Lys Xaa Xaa Gln Pro Tyr Xaa Xaa
      195      200      205
Asp Phe Xaa Xaa Xaa Xaa
      210

```

```

<210> 13
<211> 6
<212> PRT
<213> Homo sapiens

```

```

<400> 13
Met Tyr Pro Pro Pro Tyr
  1             5

```

```

<210> 19
<211> 4
<212> PRT
<213> Homo sapiens

```

```

<400> 19
Tyr Met Asn Met
  1

```

```

<210> 20
<211> 4
<212> PRT
<213> Homo sapiens

```

```

<400> 20
Tyr Val Lys Met
  1

```

```

<210> 21
<211> 6
<212> PRT
<213> Homo sapiens

```

```

<400> 21
Phe Asp Pro Pro Pro Phe
  1             5

```

```

<210> 22
<211> 4
<212> PRT
<213> Homo sapiens

```

```

<400> 22
Tyr Met Phe Met
  1

```

<210> 23  
 <211> 216  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> consensus sequence

<221> VARIANT  
 <222> (1)...(216)  
 <223> Xaa = Any Amino Acid

<400> 23  
 Met Lys Pro Tyr Phe Ser Cys Val Phe Val Phe Cys Phe Leu Ile Lys  
 1 5 10 15  
 Leu Leu Thr Gly Glu Leu Asn Asp Leu Ala Asn His Arg Met Phe Ser  
 20 25 30  
 Phe His Asp Gly Gly Val Gln Ile Ser Cys Asn Tyr Pro Glu Thr Val  
 35 40 45  
 Gln Gln Leu Lys Met Gln Leu Phe Lys Asp Arg Glu Val Leu Cys Asp  
 50 55 60  
 Leu Thr Lys Thr Lys Gly Ser Gly Asn Thr Val Ser Ile Lys Asn Pro  
 65 70 75 80  
 Met Ser Cys Pro Tyr Gln Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
 85 90 95  
 Asp Asn Ala Asp Ser Ser Gln Gly Ser Tyr Phe Leu Cys Ser Leu Ser  
 100 105 110  
 Ile Phe Asp Pro Pro Pro Phe Gln Glu Lys Asn Leu Ser Gly Gly Tyr  
 115 120 125  
 Leu Leu Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
 130 135 140  
 Pro Val Gly Cys Ala Ala Phe Val Ala Ala Leu Leu Phe Gly Cys Ile  
 145 150 155 160  
 Phe Ile Val Trp Phe Ala Lys Lys Lys Tyr Arg Ser Ser Val His Asp  
 165 170 175  
 Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys  
 180 185 190  
 Ser Arg Leu Ala Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 195 200 205  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 210 215

<210> 24  
 <211> 16  
 <212> PRT  
 <213> Rattus norvegicus

<400> 24  
 Leu Arg Ala Leu Gly Arg Gly Glu His Ser Ser Cys Gln Asp Arg Asn  
 1 5 10 15

<210> 25  
 <211> 220  
 <212> PRT  
 <213> Homo sapiens

<400> 25

```

Met Leu Arg Leu Leu Leu Ala Leu Asn Leu Phe Pro Ser Ile Gln Val
1      5      10
Thr Gly Asn Lys Ile Leu Val Lys Gln Ser Pro Met Leu Val Ala Tyr
20
Asp Asn Ala Val Asn Leu Ser Cys Lys Tyr Ser Tyr Asn Leu Phe Ser
35      40      45
Arg Glu Phe Arg Ala Ser Leu His Lys Gly Leu Asp Ser Ala Val Gln
50      55      60
Val Cys Val Val Tyr Gly Asn Tyr Ser Gln Gln Leu Gln Val Tyr Ser
65      70      75
Lys Thr Gly Phe Asn Cys Asp Gly Lys Leu Gly Asn Glu Ser Val Thr
85      90      95
Phe Tyr Leu Gln Asn Leu Tyr Val Asn Gln Thr Asp Ile Tyr Phe Cys
100      105      110
Lys Ile Glu Val Met Tyr Pro Pro Tyr Leu Asp Asn Glu Lys Ser
115      120      125
Asn Gly Thr Ile Ile His Val Lys Gly Lys His Leu Cys Pro Ser Pro
130      135      140
Leu Phe Pro Gly Pro Ser Lys Pro Phe Trp Val Leu Val Val Val Gly
145      150      155      160
Gly Val Leu Ala Cys Tyr Ser Leu Leu Val Thr Val Ala Phe Ile Ile
165      170      175
Phe Trp Val Arg Ser Lys Arg Ser Arg Leu Leu His Ser Asp Tyr Met
180      185      190
Asn Met Thr Pro Arg Arg Pro Gly Pro Thr Arg Lys His Tyr Gln Pro
195      200      205
Tyr Ala Pro Pro Arg Asp Phe Ala Ala Tyr Arg Ser
210      215      220

```

&lt;210&gt; 26

&lt;211&gt; 223

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 26

```

Met Ala Cys Leu Gly Phe Gln Arg His Lys Ala Gln Leu Asn Leu Ala
1      5      10
Ala Arg Thr Trp Pro Cys Thr Leu Leu Phe Phe Leu Leu Phe Ile Pro
20      25      30
Val Phe Cys Lys Ala Met His Val Ala Gln Pro Ala Val Val Leu Ala
35      40      45
Ser Ser Arg Gly Ile Ala Ser Phe Val Cys Glu Tyr Ala Ser Pro Gly
50      55      60
Lys Ala Tyr Glu Val Arg Val Thr Val Leu Arg Gln Ala Asp Ser Gln
65      70      75      80
Val Thr Glu Val Cys Ala Ala Thr Tyr Met Thr Gly Asn Glu Leu Thr
85      90      95
Phe Leu Asp Asp Ser Ile Cys Thr Gly Thr Ser Ser Gly Asn Gln Val
100      105      110
Asn Leu Thr Ile Gln Gly Leu Arg Ala Met Asp Thr Gly Leu Tyr Ile
115      120      125
Cys Lys Val Glu Leu Met Tyr Pro Pro Pro Tyr Tyr Leu Gly Ile Gly
130      135      140
Asn Gly Thr Gln Ile Tyr Val Ile Asp Pro Glu Pro Cys Pro Asp Ser
145      150      155      160
Asp Phe Leu Leu Trp Ile Leu Ala Ala Val Ser Ser Gly Leu Phe Phe
165      170      175

```



Tyr	Ser	Phe	Leu	Leu	Thr	Ala	Val	Ser	Leu	Ser	Lys	Met	Leu	Lys	Lys
			180					185					190		
Arg	Ser	Pro	Leu	Thr	Thr	Gly	Val	Tyr	Val	Lys	Met	Pro	Pro	Thr	Glu
		195					200					205			
Pro	Glu	Cys	Glu	Lys	Gln	Phe	Gln	Pro	Tyr	Phe	Ile	Pro	Ile	Asn	
	210					215					220				